

## IFAS EXTENSION

## Daylilies For Florida <sup>1</sup>

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Daylilies are among the most popular herbaceous perennials grown in Florida. These hardy, fleshy-rooted plants are relatively free from serious pests, have a long blooming period and adapt well to home landscape plantings. Plants are available in a wide variety of flower colors and growth habits. The present flower color selection includes shades of yellow, orange, red, pink, purple and near-white.

Daylilies are members of the lily family, in the genus *Hemerocallis*; "Hemero" is Greek for "day" and "callis" for "beauty," i.e. beauty for a day. The modern varieties of daylilies have been developed from native Chinese species. Early settlers from Asia and Europe brought many of the original species with them to America. During the last 75 years, hybridizers in the United States and England have made great improvements in daylily varieties.

### Landscape Uses

The adaptability of daylilies to a variety of cultural conditions and their availability in a wide variety of flower colors and plant sizes make them well suited for landscape use. Daylilies should be part of a planned landscape, not just planted haphazardly throughout the landscape. They are most effective

when grown in clumps of 10 plants or more of the same color. A mass planting of daylilies all of the same color or of related hues is much more effective than a mixed planting of yellows, reds and purples. The same effect can be obtained by planting a bed of yellows, pastels, pinks and melons. These should all have the same color base. If either the lightest hue or the darkest hue is used as a focal point with the other shades graduated away from this point, the effect created will give the impression of order and harmony.

Daylilies can be used effectively as foundation plantings to make a pleasing contrast to nearby evergreen shrubbery. Keep in mind the color of the building material when selecting varieties. Bright flower colors, such as yellow, should be used against redwood, brick, or dark backgrounds, and dark flower colors are best against white or light backgrounds.

A special effect can be created by planting daylilies around a garden pool or along the banks of a lake or stream. Other uses for daylilies include plantings in terraces close to the house, underneath trees, on slopes, near a gate entrance and in borders.

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Daylilies over 36 inches (0.9 m) tall are suitable for foundation plantings, the back of daylily beds or in mixed borders. Medium daylilies, those 16 to 36 inches (0.4 to 0.9 m), can be used in most settings. Dwarf daylilies, those 12 inches (0.3 m) or less, are best used for border plantings.

## Selection

Most nurseries do not sell daylilies by varieties. If you are looking for specific varieties, you will probably have to go to a daylily nursery. When selecting a daylily variety, it is important to remember that daylilies have three types of foliage growth. They are:

- **Dormant** - The foliage dies back after frost and new foliage grows in the spring.
- **Evergreen** - The foliage remains green throughout the year.
- **Semi-Evergreen** - Part of the foliage dies back during the coldest months and grows back in the spring.

Daylilies are presently available in several color patterns. They are:

- **Self** - The flower petals and sepals are the same color or shade.
- **Blend** - The flower petals and sepals are a blending of two colors, i.e. pink and rose.
- **Polychrome** - The flower is a blend of many colors, i.e. melon, pink, lavender, and yellow.
- **Bitone** - The petals and sepals differ in shade and intensity.
- **Bicolor** - The petals and sepals are different colors, i.e. red and yellow.
- **Banded or Eyezone** - A band of a different or darker shade of color forms at the juncture of the segments and the throat. This pattern is an Eye or Eyezone if the differing color is present on both the petals and sepals. It is called a band when it occurs only on the petals. A watermark is a band-type marking. It is a wide strip of a lighter shade where the petal and sepal colors meet the throat.

- **Midrib** - The color is a strong line of yellow, white, or contrasting hues down the center of each segment.
- **Edged** - This occurs when the segment edges are either lighter or darker than the segment color.

Daylily blooms are available in a variety of forms. Terms used to describe the front view of the bloom are circular, triangular, star or informal. The side view is described as flat, flaring, recurved, trumpet, double or ruffled.

- **Circular** - The flower is round in appearance and the segments generally overlap.
- **Triangular** - The segments form a triangle.
- **Star** - The segments are long and pointed. The flower looks like a three-pointed or six-pointed star.
- **Informal** - There is no recognizable shape. Segment placement is irregular, widely spaced, or floppy. This form is often called "Spider."
- **Flat** - Flowers are flat except the throat, which is concave.
- **Flaring** - The segments arch out from the throat. The flaring side view most often accompanies the triangular front view.
- **Recurved** - The segments flare, but the ends of the segments roll or tuck under.
- **Trumpet** - The segments rise from the throat in an upward pattern rather than the usual outward pattern.
- **Double** - These are blooms with more than six segments. The extra segments may number as many as 18 and come in many forms.
- **Ruffled** - The segments have a ruffled or crimped appearance. Most ornamentation is called ruffling.

## Planting Site

In Florida, the daylily is considered a cosmopolitan plant, since it thrives in the muck of the Everglades, the limestone rock of Dade County, the light sands of central Florida and the red clay hills of the northern part of the state. While daylilies will grow under many conditions, it is important to try to select a favorable location.

Daylilies will grow in full sun or filtered shade. The darker colored varieties (reds and purples) grow best in partial shade, while light colored varieties (yellows, pinks and pastels) need full sun to bring out their lovely colors. Heavy shade should be avoided because it will cause thin, spindly growth and poor flowering. The light level under pine trees is ideal for growing daylilies.

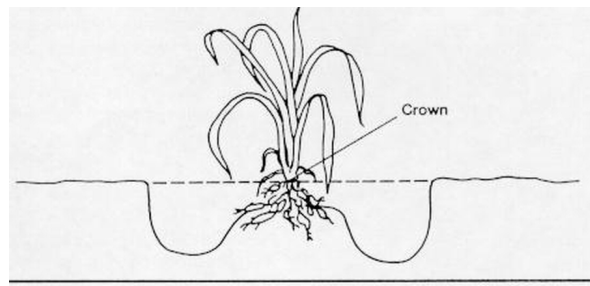
Soil for a daylily bed should be tilled and amended by incorporating a 3- to 4-inch layer of organic matter, such as peat, compost or well-rotted manure, and 3/4 to 1-1/2 pounds of 12-4-8 or 15-5-15, or an equivalent amount of other complete fertilizers, per 100 square feet of bed. The amended soil should be leveled and moistened. Treating beds with a soil sterilant is highly desirable prior to planting. However, most sterilants are restricted-use pesticides and must be applied by a professional pesticide applicator.

## Planting

Daylilies can be planted throughout the year in Florida; however, spring or fall plantings are ideal. Fall planting allows the plants time to develop new roots and become established before the next blooming season. Prepare daylilies for planting by removing foliage 6 to 8 inches (15.2 to 20.3 cm) from the crown, the point where foliage and roots join. Examine the root system closely and remove any damaged roots.

Daylilies are planted 18 to 24 inches (0.5 to 0.6 m) apart, since some varieties multiply quickly and become so crowded that flower production is affected. Under Florida conditions, when planted like this, daylilies can usually grow in one location for 3 to 5 years before division is necessary.

To plant daylilies, dig holes larger than the root masses with a trowel or small shovel. Make a mound of soil in the center of the hole and set the center of the daylily on top of the mound, spreading roots out to the sides of the mound (Figure 1). Next, fill in the hole with loose soil, making sure the crown of the daylily is at ground level. Daylilies should be planted at the same depth they were originally grown. Water newly planted daylilies and keep the soil moist until plants are well established.



**Figure 1.** Proper planting of daylily.

## General Care

Mulching daylilies will help retain soil moisture, reduce weeds and moderate soil temperatures. Pine needles, leaves or shredded bark are among the most desirable mulches and should be applied in a 2-inch (5.1 cm) layer.

Daylilies can survive temporary dry conditions very well, due to their extensive root systems. However, the plants' bloom size, number of blooms, plant growth and overall vigor can be adversely affected by prolonged drought. A spectacular display of blooms can be achieved by the weekly application of enough water to soak the soil 8 to 12 inches (20.3 to 30.3 cm) deep. However, overhead watering during the heat of the day will cause open blooms to spot and/or wilt.

Daylilies should be fertilized in the fall, early spring and mid-summer with 3/4 to 1-1/2 pounds of 12-4-8 or 15-5-15 per 100 square feet of bed or an equivalent amount of another complete fertilizer. Fertilizer should be evenly applied between plants, kept off the foliage and watered into the soil after application.

## Pests

Most daylily plantings in Florida are virtually free from attack by insects or disease and rarely need a pesticide application. However, daylilies occasionally may be attacked by aphids, thrips, spider mites or grasshoppers, which will damage the foliage and flower buds.

Aphids or plant lice are small, soft-bodied insects with sucking mouthparts. They damage leaves, causing the tips of the damaged leaves to curl and die.

Most home gardeners do not realize spider mites are present until damage is severe, because these pests are very small and usually go undetected on the underside of leaves. Mites damage leaves by sucking plant juices and chlorophyll. Damaged leaves lose their green color, turn tan and then brown, and eventually die.

Thrips are one of the most serious pests that attack daylilies. Thrips are gray-black insects about the size and shape of the upper part of a small exclamation point (!). Thrips damage immature stems and blooms. The damage causes discolored, misshapened flowers and reduces flower bud set.

When pest infestations are severe or where large numbers of plants are involved, chemical control may be needed. For recommendations on selection and application of insecticides and miticides, contact the cooperative extension service in your county.

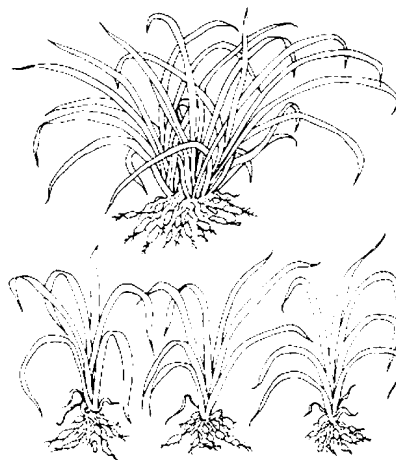
## Propagation

Daylilies are propagated by seed, division, or by proliferations (offsets obtained from the flowering stalk). Although daylilies can be grown readily from seed, variation in seedling populations is great. Therefore, named varieties and selected clones must be propagated vegetatively to maintain a true line.

Seeds of daylilies germinate in 10 days to 2 weeks and require no special treatment. Seeds are ready for harvest when the pods turn brown and start to split. Freshly harvested seed should be planted in flats or pots of sterilized sandy soil and covered with finely sifted soil to a depth of 1/8 to 1/4 inch (3.2 to

6.4 cm). Soil should be carefully watered and kept moist while seeds are germinating. Germinating containers should be placed in a shaded location and covered with glass or clear plastic to prevent the soil from drying out. After germination, when plants are 4 inches (10.2 cm) in height, transplant the seedlings into new flats, spacing them 1 to 2 inches (2.5 to 5.1 cm) apart. Transplant these seedlings into nursery beds when they are 4 to 6 inches (10.2 to 15.2 cm) tall. Some growers prefer to leave the seedlings in flats until they are large enough to set out in nursery beds. Daylilies usually take 2 years from seed to flowering.

Daylilies are propagated by division of parent clumps to maintain a particular variety (Figure 2). Plant division is best done immediately after the flowering season. Dig the entire clump, shaking or washing off the soil without damaging the roots. Washing the soil away exposes the roots and makes it easier to see just how many divisions can be made. Next, cut the leaves off 6 inches (15.2 cm) above the crown and divide the clump with a sharp knife. Smaller clumps can be pulled apart. The old portions of the roots should be pruned to promote the formation of new roots. After the plant is divided, it is ready to be planted.



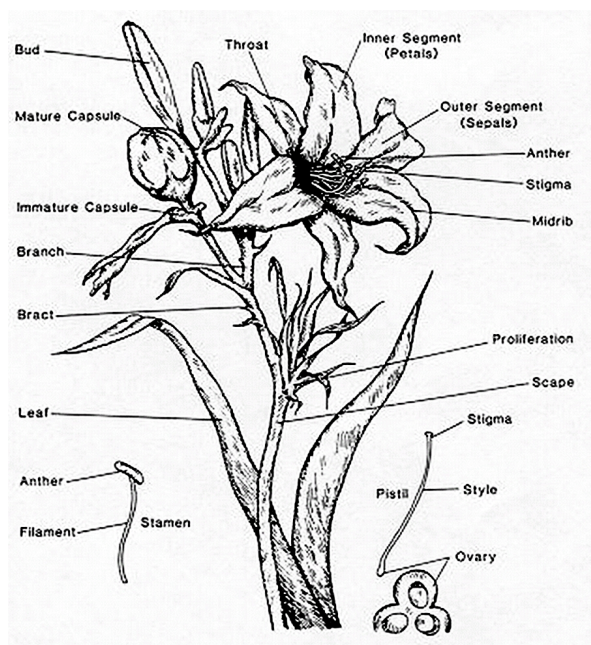
**Figure 2.** Division of parent clump.

Daylilies' flower stems or scapes often develop small plants called proliferations. A proliferation can be removed easily and rooted to form another plant. Cut the stem a few inches below the proliferation and place it into the soil. Soil should be placed around the

base of the proliferation. Keep the plant watered while it is establishing its root system.

## Hybridizing

Breeding daylilies can be an enjoyable and rewarding experience. The large flowers are easy to work with (Figure 3), and the wide variation obtained in seedling populations makes hybridizing interesting. Hybridizing is usually done to improve plant characteristics such as color of flowers, width of petals, number of blooms and length of scapes. Carefully study each plant's desirable features and never cross two daylilies that have serious weaknesses.



**Figure 3.** Parts of daylily.

After the parent plants have been chosen, it is necessary to determine whether the flowers open at the same time. Since the flowers of the daylily are short-lived, it may be necessary to collect pollen from the intended male plant (each plant having both male and female characteristics) for use in one or more crosses of prospective female plants.

The actual mechanics of making a cross, collecting from the "male" and pollinating the "female," are simple. Pollen is best collected in the early morning before insects have eaten or mixed it. Pollen can be collected by scraping it off the anthers into an empty gelatin capsule or vial, sealing it,

labeling it as to the male parent and placing it in a refrigerator until the female flowers are open.

Early, cool mornings are the best times to pollinate. Before pollinating, the anthers should be removed from the flower that is to serve as the female parent to prevent accidental self-fertilization.

The easiest method of transferring pollen is to use a camel-hair brush. Pollen is taken from one bloom or from a stored vial and dabbed onto the pistil of another bloom. The pollen should be placed on the sticky tip (stigma) of the pistil.

Crosses should be labeled, listing both parents and date of pollination. The pods will ripen in six to eight weeks. The pods are ready for collection when they turn brown, begin to dry and the tops start to split.